

AMENDMENTS TO THE CLAIMS

1-16 (Canceled)

17. (Currently Amended) ~~A system as claimed in claim 16~~
~~The system of Claim 31, further comprising a heater primarily configured to heat said substrate exposed surface prior to exposing said substrate~~
~~the exposed surface being exposed~~ to the laser light, whereby the energy required to be supplied by said array of lasers for marking said substrate is reduced.

18. (Currently Amended) ~~The system of Claim 17~~
~~A system as claimed in claim 17, further comprising drive electronics and a heat exchanger, wherein at least one of said array of lasers and said drive electronics generates heat and said heat exchanger transfers the heat generated to the exposed surface.~~ ~~said substrate~~.

19. (Currently Amended) ~~The system of Claim 17~~
~~A system as claimed in claim 17, wherein the heater comprises a light emitter.~~

20. (Currently Amended) ~~The system of Claim 31~~
~~A system as claimed in claim 16, comprising another light emitter positioned adjacent to said laser array and adapted to supply sufficient light so as to bring said substrate close to the a marking threshold, wherein while said array of lasers emits light, and the substrate exposed surface passes the marking threshold due to the combined effect of said laser array and said other light emitter.~~

21. (Currently Amended) ~~The system of Claim 20~~
~~A system as claimed in claim 20, wherein said light emitter emits light to said substrate exposed surface at a point substantially coincident with the point of laser radiation~~
~~light from the laser light emitting source.~~

22. (Currently Amended) ~~The system of Claim 31~~
~~A system as claimed in claim 16, comprising means for varying the energy supplied to each point of said substrate~~
~~the exposed surface~~ by varying over time at least one of the pulse and amplitude of the transmitted light, whereby variation in mark pigmentation may be achieved.

23. (Currently Amended) ~~The system of Claim 31~~
~~A system as claimed in claim 16, wherein at least one optical element is located between said lasers and said substrate.~~

24. (Currently Amended) The system of Claim 23A system as claimed in claim 23, wherein said at least one optical element incorporates at least one of a single bulk lens, an array of micro lenses, a wave guide, a graded-index lens, a diffractive optical element, and a reflector.

25. (Currently Amended) The system of Claim 31A system as claimed in claim 16, further comprising a plurality of radiation outputs and means for switching the path of radiation to selected outputs.

26. (Currently Amended) The system of Claim 31A system as claimed in claim 16, further comprising means for directing the radiation in a plurality of directions.

27. (Currently Amended) The system of Claim 25A system as claimed in claim 25, further comprising at least one of a mechanically displaceable optical element, an electronically switchable diffractive element, and a branched wave guide.

28. (Currently Amended) The system of Claim 26A system as claimed in claim 26, further comprising at least one of a mechanically displaceable optical element, an electronically switchable diffractive element, and a branched wave guide.

29. (Currently Amended) The system of Claim 31A system as claimed in claim 16, wherein each said laser of the array lasers is configured to be pulsed.

30. (Canceled)

31. (New) A laser marking system configured to mark a substrate, the system comprising:

a laser light emitting source;

a substrate formed of at least one of paper, a sheet form, synthetic paper and resin film;

means for displacing said substrate relative to said laser light emitting source, wherein the displacing means is configured to expose a surface of the substrate to light from the laser light emitting source, and the exposed surface is sufficiently sensitive to light from the laser light emitting source that, when exposed, energy is absorbed at at least one point of said substrate; whereby a reaction occurs which marks the exposed surface; and

means for transmitting light from said laser light emitting source to the exposed surface,

wherein said laser light emitting source comprises an array of lasers arranged for simultaneous multi-point marking, and said array of lasers comprise semi-conductor laser diodes configured to emit light in at least one of the infra red and near infra red spectrums.

32. (New) A laser marking system configured to mark a substrate, the system comprising:

a laser light emitting source;

a substrate formed of at least one of paper, a sheet form, synthetic paper and resin film;

a moving component configured to displace the substrate relative to said laser light emitting source, wherein the moving component is configured to expose a surface of the substrate to light from the laser light emitting source, and the exposed surface is sufficiently sensitive to light from the laser light emitting source that, when exposed, energy is absorbed at least one point of said substrate; whereby a reaction occurs which marks the exposed surface; and

an optical element configured to transmit light from said laser light emitting source to the exposed surface,

wherein said laser light emitting source comprises an array of lasers arranged for simultaneous multi-point marking, and said array of lasers comprise semi-conductor laser diodes configured to emit light in at least one of the infra red and near infra red spectrums.